

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-9 (canceled).

Claim 10 (new): A one-port surface acoustic wave resonator comprising:
a rotated Y-cut LiTaO₃ substrate;
an interdigital electrode transducer disposed on the LiTaO₃ substrate and including electrode fingers; and

reflectors disposed on both sides of the interdigital electrode transducer in a surface acoustic wave propagation direction of the interdigital electrode transducer;
wherein

when an electrode finger width of the electrode fingers of the interdigital electrode transducer is denoted by a and a gap between the electrode fingers is denoted by b, a metallization ratio, a/(a + b), is in the range of about 0.55 to about 0.85;
and

the interdigital electrode transducer is overlapping-length weighted.

Claim 11 (new): The one-port surface acoustic wave resonator according to claim 10, wherein a cut angle of the LiTaO₃ substrate is in the range of about 36° to about 60°.

Claim 12 (new): The one-port surface acoustic wave resonator according to claim 10, wherein the amount of the overlapping-length weighting is about 87.5% or less.

Claim 13 (new): The one-port surface acoustic wave resonator according to claim 10, wherein the amount of the overlapping-length weighting is about 75% or less.

Claim 14 (new): The one-port surface acoustic wave resonator according to claim 10, wherein a film thickness of the interdigital electrode transducer is set such that a mass is equivalent to that of an aluminum electrode having a film thickness of about 8% to about 14% of the wavelength of the surface acoustic wave.

Claim 15 (new): The one-port surface acoustic wave resonator according to claim 10, wherein a film thickness of the interdigital electrode transducer is set such that a mass is equivalent to that of an aluminum electrode having a film thickness of about 9% to about 11% of the wavelength of the surface acoustic wave.

Claim 16 (new): The one-port surface acoustic wave resonator according to claim 10, wherein a film thickness of the interdigital electrode transducer is set such that the mass is equivalent to that of a copper electrode having a film thickness of about 2.4% to about 4.2% of the wavelength of the surface acoustic wave.

Claim 17 (new): The one-port surface acoustic wave resonator according to claim 10, wherein a film thickness of the interdigital electrode transducer is set such that the mass is equivalent to that of a gold electrode having a film thickness of about 1.1% to about 2.0% of the wavelength of the surface acoustic wave.

Claim 18 (new): A surface acoustic wave filter including the one-port surface acoustic wave resonator according to claim 10.

Claim 19 (new): The surface acoustic wave filter according to claim 18, wherein the surface acoustic wave filter is one of a ladder-type surface acoustic wave filter, a lattice-type surface acoustic wave filter, and a surface acoustic wave filter provided with the one-port surface acoustic wave resonator as a trap.

Claim 20 (new): A one-port surface acoustic wave resonator comprising:

a rotated Y-cut LiTaO₃ substrate;

an interdigital electrode transducer disposed on the LiTaO₃ substrate and including electrode fingers; and

reflectors disposed on both sides of the interdigital electrode transducer in the surface acoustic wave propagation direction of the interdigital electrode transducer; wherein

a metallization ratio, $a/(a + b)$, is in the range of about 0.45 to about 0.85, where an electrode finger width of the electrode fingers of the interdigital electrode transducer is denoted by a and a gap between the electrode fingers is denoted by b;

the interdigital electrode transducer is overlapping-length weighted; and

a cut angle of the LiTaO₃ substrate is in the range of about 40° to about 60°.

Claim 21 (new): The one-port surface acoustic wave resonator according to claim 20, wherein the amount of the overlapping-length weighting is about 87.5% or less.

Claim 22 (new): The one-port surface acoustic wave resonator according to claim 20, wherein the amount of the overlapping-length weighting is about 75% or less.

Claim 23 (new): The one-port surface acoustic wave resonator according to claim 20, wherein a film thickness of the interdigital electrode transducer is set such that the mass is equivalent to that of an aluminum electrode having a film thickness of about 8% to about 14% of the wavelength of the surface acoustic wave.

Claim 24 (new): The one-port surface acoustic wave resonator according to claim 20, wherein a film thickness of the interdigital electrode transducer is set such that a mass is equivalent to that of an aluminum electrode having a film thickness of about 9% to about 11% of the wavelength of the surface acoustic wave.

Claim 25 (new): The one-port surface acoustic wave resonator according to claim 20, wherein a film thickness of the interdigital electrode transducer is set such that the mass is equivalent to that of a copper electrode having a film thickness of about 2.4% to about 4.2% of the wavelength of the surface acoustic wave.

Claim 26 (new): The one-port surface acoustic wave resonator according to claim 20, wherein a film thickness of the interdigital electrode transducer is set such that the mass is equivalent to that of a gold electrode having a film thickness of about 1.1% to about 2.0% of the wavelength of the surface acoustic wave.

Claim 27 (new): A surface acoustic wave filter including the one-port surface acoustic wave resonator according to claim 20.

Claim 28 (new): The surface acoustic wave filter according to claim 27, wherein the surface acoustic wave filter is one of a ladder-type surface acoustic wave filter, a lattice-type surface acoustic wave filter, and a surface acoustic wave filter provided with the one-port surface acoustic wave resonator as a trap.